

**REMARKS**

**I. STATUS OF THE CLAIMS**

New claim 17 is added herein. Support for the new claim is found, for example, on page 10, lines 13-15 and page 11, lines 33-35, of the application.

In view of the above, it is respectfully submitted that claims 1, 3 and 5-17 are currently pending.

**II. REJECTION OF CLAIMS 1, 5, 7-11, 13 AND 16 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER EGNELL ET AL. (U.S. PATENT NO. 6,590,681) IN VIEW OF NAGEL ET AL. (U.S. PATENT NO. 5,481,399) AND SRIDHAR (U.S. PATENT NO. 5,778,118)**

Claim 1 is amended herein to recite a rejection/add filter that blocks a wavelength division multiplexed optical signal contained in the passing signal that has the same wavelengths as the insertion signal and couples the passing signal with the insertion signal, the wavelengths of the blocked optical signal being the same as the wavelengths of the inserted optical signal. The Office Action states on page 3 that Egnell does not disclose that "blocking, inserting, and coupling ... are performed by a rejection/add filter." Rather, the Office Action relies on Nagel to teach this feature. The Applicant respectfully submits that the cited art fails to teach the above features of amended claim 1.

Nagel discusses a "two-stage in-line erbium doped fiber amplifier (EDFA) system for adding and dropping telemetry signals from a fiber optic line." See column 1, lines 11-24, of Nagel. The system has "a drop/add device 20 [that] is comprised of a drop element, such as a filter 24, and an add element, such as a wave division multiplexer 30 (see FIG. B) or a standard passive 3 dB coupler 26 (see FIG. 2A)." See column 4, lines 4-9, of Nagel. A telemetry signal at a carrier wavelength (here, 1532 nm) is dropped and a new 1532 nm telemetry signal is added. See column 4, lines 32-44, of Nagel. A motivation for the amplifier is to remove "the forward propagating and backward propagating spontaneous emission noise generated by the EDFAs, thereby increasing the signal to noise ratio of the communication system." See column 2, lines 15-20, of Nagel.

The Office Action states on page 3 that:

Nagel et al. teach a system that is related to the one described by Egnell et al. including an apparatus with a blocking/filtering function and an optical coupling function for adding and dropping wavelengths in an optical communication system (Figures 2 and 2A-C). Nagel et al. further teach a rejection/add filter that blocks an optical signal and inserts another optical signal, coupling the passing

signal that passes the rejection/add filter with the inserted optical signal, the wavelength of the blocked signal being the same as the wavelength of the inserted optical signal (Figures 2B and 2C; column 4, lines 4-44).

However, per the above, claim 1 recites a rejection/add filter that **blocks a wavelength division multiplexed optical signal** contained in the passing signal that has the same wavelengths as the insertion signal. The blocked signal has multiple wavelengths. As is clearly illustrated in Figs. 2A-2C and the associated description thereof in Nagel, a **single wavelength** is blocked and inserted. Nagel is not capable of blocking a wavelength division multiplexed signal containing multiple wavelengths from a passing signal. Rather, Nagel is directed to dropping a telemetry signal at a carrier wavelength and adding a new telemetry signal at the same wavelength.

The Office Action states on page 11 that "Examiner respectfully disagrees with Applicant's assertion on page 5 of the [previous] response that combining the filter taught by Nagel et al. with the system disclosed by Egnell et al. would not be feasible." However, in the previous Amendment, the Applicant argued that "[t]here is no indication whatsoever in the record that combining the filter of Nagel into the optical fiber network as described in Egnell would be more efficient, **let alone feasible**." Thus, the Applicant did not state that it is impossible to include the EDFA of Nagel with the optical WDM network of Egnell. Rather, the Applicant did not find evidence in the record that such a combination was feasible to achieve the apparatus discussed in Egnell.

Further, the Examiner did not address the Applicant's argument that the record does not demonstrate how combining the EDFA of Nagel with the optical WDM network of Egnell would be **more efficient**. The Office Action simply reiterates on page 4 the previous assertion that such a combination would have been obvious "in order to manufacture two elements more efficiently as one element." This statement is merely conclusory and does not provide a satisfactory demonstration as to how combining two elements as one is more efficient to the manufacturing process. Further, Nagel predates Egnell and nonetheless, the inventors of Egnell did not elect to discuss including the EDFA of Nagel in their optical WDM network. If the Examiner continues to maintain that the combination of Egnell and Nagel is more efficient, the Applicant respectfully requests that the Examiner provide specific reasoning and support for this assertion.

Although the above comments are specifically directed to claim 1, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited art.

In view of the above, it is respectfully submitted that the rejection is overcome.

**III. REJECTION OF CLAIMS 3, 6, 14 AND 15 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER EGNELL ET AL. IN VIEW OF NAGEL ET AL. AND ASAHI ET AL. (U.S. PATENT NO. 6,195,186)**

Claim 3 is amended herein to recite a rejection/add filter that blocks a wavelength division multiplexed optical signal contained in the passing signal that has the same wavelengths as the insertion signal and couples the passing signal with the insertion signal, the wavelengths of the blocked optical signal being the same as the wavelengths of the inserted optical signal. Per the above, Egnell and Nagel fail to teach this feature. Further, nothing is cited or found in Asahi that overcomes the deficiencies of Egnell and Nagel discussed above with respect to claim 1. Thus, claim 3 is also patentably distinguishable over the cited art for the reasons discussed above with respect to claim 1.

Although the above comments are specifically directed to claim 3, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited art.

In view of the above, it is respectfully submitted that the rejection is overcome.

**IV. REJECTION OF CLAIM 12 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER EGNELL ET AL. IN VIEW OF NAGEL ET AL. AND SRIDHAR AS APPLIED TO CLAIMS 1 AND 9 ABOVE, AND FURTHER IN VIEW OF ADAMS ET AL. (EP 1063803)**

Claim 12 depends from claim 1 and adds further features thereto. Nothing is cited or found in Sridhar or Adams that overcomes the deficiencies of Egnell and Nagel discussed above with respect to claim 1. Thus, the arguments above with respect to claim 1 also apply to claim 12.

In view of the above, it is respectfully submitted that the rejection is overcome.

**V. NEW CLAIM**

New claim 17 is added herein. Claim 17 recites the optical transmission apparatus of claim 1 further comprising:

a supervisory control signal extraction filter that extracts a supervisory control signal from the dropping signal; and  
a supervisory control signal insertion filter that inserts a supervisory control signal into the passing signal.

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Nothing is cited or found in the cited art that teaches or suggests these features. Thus, it is respectfully submitted that new claim 17 is patentably distinguishable over the cited art.

## VI. CONCLUSION

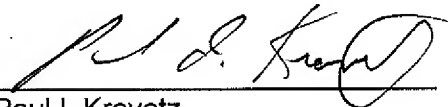
In view of the above, it is respectfully submitted that the application is in condition for allowance, and a Notice of Allowance is earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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